

Zoom 8

Class Rules

Rules made in accordance with the ISAF One-Design Class Rules Standards

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INTERNATIONAL ZOOM 8 CLASS RULES

The Zoom 8 was designed in 1991 by Henrik Segercrantz, Finland, and was adopted as an International Strict One Type Class by ISAF at their Annual Meeting .2004 and enforced by them on the 1st of March 2005 .

SECTION A – FUNDAMENTAL RULES

A.0 Objective of these Rules

A.0.1 The Zoom 8 is a Strict One-Design Dinghy. The intention of these Rules is that the boats shall be as alike as possible in all respects affecting performance in order that the true test, when raced, is between crews and not boat or equipment.

A.1 One-Design Clause

A.1.1 Anything not specifically permitted by these Class Rules is PROHIBITED.

A.2 Abbreviations

- A.2.1 **ISAF** International Sailing Federation
- MNA** ISAF Member National Authority
- IZCA** International Zoom 8 Class Association
- NCA** National Zoom8 Class Association
- ICF** International Class Fee
- OAR** Owner of All Rights to the Design and Brand name
- MF** Measurement Form
- MC** Measurement Certificate
- RRS** Racing Rules of Sailing
- LBP** Licensed Builders Plaque
- ERS** Equipment Rules of Sailing

A.3 Authority

- A.3.1 The authority of the Class is IZCA, which will cooperate with ISAF in all matters concerning these Class Rules. All final ruling concerning these Class Rules, the Measurement Diagrams, the Appendix Measurement, and the Building Specifications shall be approved by ISAF.
- A.3.2 Neither the ISAF, an MNA, the IZCA, an NCA, nor a requested measurer is under any legal responsibility in respect of these Class Rules or accuracy of measurement and no claim arising from them can be entertained.

A.4 Language

- A.4.1 The official language of the Class is English and in case of dispute over a translation the English text shall govern.
- A.4.2 The word “shall” is mandatory and the word “may” is permissive.

A.5 Class Rules and their Interpretations

- A.5.1 Whenever in these Rules the words “Class Rules” are used, they shall be taken as including the Measurement Diagrams and the Appendix, Measurement.
- A.5.2 In case of discrepancy between these Rules, the Measurement Diagrams, the Appendix, Measurement or the Building Specifications, the matter shall be referred to IZCA or ISAF as stated in A.3.1.
- A.5.3 Any interpretation of Class Rules required at an Event may be made by an International Jury, constituted in accordance with ***RRS***. In this case, the jury shall consult the Event Chief Measurer. Such interpretation shall only be valid during the Event, and the Organising Authority shall, as soon as practical after the event, inform the ISAF and IZCA of such an interpretation.
- A.5.4 All measurements have a tolerance of ± 5 mm unless otherwise stated in these Rules.

SECTION B - ORGANISATION

B.1 Administration of the Class

- B.1.1 ISAF may delegate part or all of its functions, as stated in these Class Rules, to a MNA.
- B.1.2 In countries where there is no MNA, its functions as stated in these Class Rules shall be carried out by the IZCA, which may delegate the administration to an NCA.

B.2 International Class Fee / Plaque and the Licensed Builder's Plaque

- B.2.1 The ICF shall be paid by the Licensed Builder to ISAF who shall, after having received the payment provide the Licensed Builder with the ISAF plaque.
- B.2.2 All dinghies shall be equipped with a unique LBP, provided by the OAR, stating the name of the builder and the CE-certification organ or other needed safety organ in the country of production. No dinghy not showing this plaque firmly attached to its cockpit may be measured or accepted by an MNA as a Zoom 8 Racing Dinghy.

B.3 Sail Numbers

- B.3.1 The sail number shall be issued by the MNA, who shall inform the NCA of the names and addresses of the owners as well as the sail number.
- B.3.2 The sail numbering is based on a National Sail numbering system starting from number 1. Alternatively, an owner may be allotted a personal sail number by the MNA, which may be used on all his/her yachts in the Class.

B.4 Measurers

- B.4.1 Fundamental measurement (measurement required by the Class Rules) shall only be carried out as an In-House Measurement procedure as stated from time to time by ISAF.
- B.4.2 A measurer shall not measure any part owned, designed, or built by himself, or in which he is an interested party, or has a vested interest, except where permitted by ISAF or these Class Rules.
- B.4.3 If a measurer is in any doubt as to the legality of any part he shall consult IZCA before signing the MC.

B.5 Measurement Certificates

- B.5.1 The owner shall present the completed MC, together with a receipt of evidence that the NCA fee has been paid, to the MNA together with any registration fee that may be required.
- B.5.2 Upon receipt of a correctly completed MC and given proof of that the sailor is currently a member of a sailing club/member of the MNA, the MNA shall allot a National Sail Number.
- B.5.3 Notwithstanding anything contained herein, the MNA may withdraw an MC and shall do so on request of ISAF. Upon request, an owner is to return the MC to the MNA.
- B.5.4 The LBP, stated in B.2.3 shall be permanently fixed, upon approval by the recognised measurer, on port side in the aft end of the cockpit.
- B.5.5 In-House Measurement Procedure shall take place at each of the Builder's premises.

B.6 Change of Ownership

- B.6.1. Change of ownership does not invalidate the MC. The new owner shall present the MNA the original MC with any registration fee that may be required.

B.7 Amendments to Class Rules

- B.7.1 Amendments to these Rules shall be finally be approved by each of:
 - a) IZCA
 - d) ISAF, who will have the final ruling
- B.7.2 Within IZCA all amendments to these Rules shall be approved at a World Council Meeting by at least two thirds of the members of the NCA/World Council Members replying to a ballot as stated in the Constitution.

SECTION C – CONDITIONS FOR RACING

C.1 Equipment

C.1.1 General

- a) Only equipment endorsed in accordance with these Class Rules shall be used.
- b) Any safety equipment required from time to time by an International, National or other Governing Authority of the country where the dinghy is raced may be fitted or carried.

C.1.2 Mandatory

- a) A towing line must be attached to the bulls eye in the bow at all times when racing. The line shall be of a floating type and shall have a diameter of not less than 6 mm and length not less than 5 m unless otherwise prescribed by the Race Committee. The towing line shall have a nominal braking strength of not less than 300 kg equal to 2940 N.
- b) A shock cord arrangement of the type and dead ends as supplied by the builder shall at all times while racing be used in order to keep the dagger board in place when capsizing.
- c) The mast shall at all times while racing be fixed to the hull with the Cunningham in order to keep it in place when capsizing.
- d) The hiking straps shall be lead under the traveller and fixed in both ends as supplied by the builder.

C.1.3 Optional

- a) One fixed compass. If electronic, it may only have heading and timer functions. Any memory functions are forbidden. The compass may be mounted on any part of the deck or in the cockpit provided that the hull cavity is not pierced by anything other than the fasteners. The compass shall not be fitted to the inspection ports.
- b) One compass that may not be fixed to the boat. If electronic, it may only have heading and timer functions. Any memory functions are forbidden.
- c) Electronic timing devices are allowed.
- d) Wind indicators may be attached as desired provided that the sail is not cut and the buoyancy of the hull and mast are not impaired.
- e) Clips, ties or bags to stow or secure safety or other equipment may be used on the deck, at the inspection ports, or in the cockpit.
- f) Non-slip tape may be applied at the deck and in the cockpit.
- g) The use of ropes, lines, plastic flexible adhesive tape or similar is permitted to secure shackles, pins and clips, to bind sheets, lines and rigging, except what is stated under limitations.
- h) A mainsheet ratchet block with optional swivel and a spring may be mounted on the mainsheet base plate. The make and function of the ratchet block is free.

- i) The hiking straps may be substituted with any type of non-stretch material and they may be padded.
- j) Attachment of shock cord between hiking straps, hull or existing fittings is free.
- k) The outhaul line may be led around the mast, when not altered as stated in F.4.2.b, and fitted with a thimble.
- l) The Cunningham may be run through a double block fixed to the boom fitting, when not altered as stated in F.7.e and F.7.f.
- m) The traveller adjustment line/lines may have a 1:1 or 1:2 ratio and be of any length
- n) A shock cord may be attached to the outhaul line and the boom to avoid slack.
- o) Tape, stickers, maps and instructions may be fixed to the hull and equipment.
- p) A red protest flag may be attached to the boom
- q) The boom and the mast may at a later date be fitted as stated in F.4.b, F.7.e and F.7.f without re-measurement or invalidation of the MC.
- r) The kicking strap system shall be attached only to the appropriate boom and mast attachments. The system is optional but may only consist of blocks, shackles, hooks, wire, rope and one cleat.
- s) The fair leads on the cleats for the traveller adjustment may be removed

C.1.4 Limitations

- a) Ropes, lines, flexible adhesive tape or similar shall not be used to construct new fittings or modify the function of the existing fittings.
- b) In series of races no more than one sail or item of equipment shall be used except when mentioned in the sailing instructions or when a sail or item of equipment has been damaged beyond repair. Such replacement may be made only with the approval of the Race Committee.

C.1.5 Additional Rules

- a) The rudder blade shall be maintained in the full down i.e. vertical position except when exceptions to this rule is prescribed by the Race Committee for racing in shallow waters.
- b) All inspection port covers and the drainage plug shall be in place and tight while racing.

C.2 Buoyancy

- C.2.1 All three buoyancy bags inside the hull shall be filled with air at all times when racing.

C.3 Flotation

No restrictions.

C.4 All-Up Weight

- C.4.1 The all-up weight of the dinghy in dry condition, including sail and all equipment, except compasses, timers and personal equipment. shall not be less than 48,0 kg.

C.5 Setting of Sails

- C.5.1 The sail shall be set so that the highest visible point of the sail at the head does not exceed the top of the mast.

C.6 Crew

- C.6.1 The Zoom 8 shall be raced with either one or two persons aboard.

C.7 Advertising

- C.7.1 Advertising is permitted in accordance with ISAF Regulation 26 as Category C.

C.8 Certificate

- C.8.1 The dinghy shall have been granted an MC by its Licensed Builder.
- C.8.2 Any dinghy owned by a MNA member club, registered as a member in the NCA, which has been granted an MC, may appointed to its members for use in any race.

C.9 Membership

- C.9.1 No person is permitted to race a Zoom 8 in any fleet, inter-fleet, district or other sanctioned event unless at least one member of the crew is a member of the NCA.
- C.9.2 The NCA may issue a temporary membership to such a sailor who is appointed a Wild Card (a dinghy free of charge for one specific event) by the organisers of a national or international event.
- C.9.3 If a sailor does not have a NCA in his own country, his/her membership application will be appointed to the IZCA, who will adopt the sailor as a temporary member until such a time when the NCA in the country in question has been formed.

C.10 Additional Rules

- C.10.1 See section 1 Appendix Measurements.
- C.10.2 One watertight inspection port not exceeding 152 mm internal diameter may be installed on the foredeck for access to the hull cavity.
- C.10.3 Cushions or similar which are attached to the shell of the dinghy are prohibited.

C.10.4 Regarding clothing, R.R.S. shall apply except that

- a) Fabric weight jackets and water pockets, compartments or containers in or attached to clothing or equipment are not permitted.
- b) The total weight of clothing and equipment worn by a competitor, excluding footwear, shall not be capable of exceeding 11,0 kg when soaked with water and weighed as provided in the *R.R.S.*

SECTION D – HULL

D.1 Measurements and Endorsements

D.1.1 The hull shall conform to the Class Rules in force at the time of fundamental measurement. Alternations or repairs shall be in accordance with the current Class Rules.

D.1.2 The fundamental measurement procedure for the hull is presented in the Builders' Manual.

D.1.3 Templates used for re-measurement shall be obtained from the IZCA.

D.1.4 The hull shall be In-House measured before leaving the Licensed Builders' premises. In case of measurement dispute, C.10.1 is applied.

D.1.5 Repairs and preventive maintenance to the hull, deck or any fittings and fixings may be carried out without violation of these Rules provided such repairs are made in such a way that the essential shape characteristics or function of the original are not affected.

D.1.6 An MNA may, after consulting with the IZCA, approve one or more individuals at a builder to measure the hull produced by that builder. A License shall be issued for this purpose.

D.2 Builders

D.2.1 Hull builders shall be licensed and trained in the production of the dinghy by the OAR and proven their skill to be acknowledged as Licensed Builders of the Zoom 8 by all MNA.

D.2.2 The Licensed builder shall, at his own expense, correct or replace any dinghy that does not comply with the Class Rules as a result of an omission or error by the builder.

D.2.3 The Zoom 8 shall display a LBP obtained from the OAR fixed in the rear port side of the cockpit as stated in B.2.3.

D.2.4 All dinghies shall be produced from moulds taken from the Master Moulds or their substitute approved by both OAR and ISAF.

D.3 Hull Shell

D.3.1 Materials

- a) The hull and deck shall be built in accordance with the Builders Manual.
- b) Construction shall be of approved glass reinforced polyester resin, GRP. Where distance material is used, it shall be of Coremat-type or equal. The use of fibres other than glass is prohibited. The use of epoxy or vinylester in the hull or deck is prohibited.
- c) The deck shall be assembled with the hull in an approved mould.

D.3.2 Dimensions

The hull dimensions shall be in accordance with the Appendix, Measurement.

D.3.3 Weights

- a) The complete Zoom 8 hull, including deck and fixed fittings shall be weighted. The weight shall be minimum 38 kg.
- b) Corrector weight of lead with a maximum weight of 4 kg may be permanently fixed to the inside of the main bulkhead at the centreline above the centreboard case.

D.4 Deck

D.4.1 Rules as in D.3.

D.5 Hull Additions

D.5.1 Additional bulkheads and thwarts are not permitted.

D.5.2 Buoyancy

The hull and deck mouldings comprise one large buoyancy compartment. No additional holes, but for a 5 mm breathing hole placed in upper back part of the outer drum case and what is stated in C.10.2 are permitted.

D.6 Additional Rules

D.6.1 Polishing and painting is permitted.

SECTION E – HULL APPENDAGES

E.1 Measurements and Endorsements

- E.1.1 All hull appendages shall conform to the Class Rules in force at the time of fundamental measurement. Alternations or repairs shall be in accordance with the current Class Rules.
- E.1.2 An NCA may, after consulting with IZCA, approve one or more individuals at a builder to measure hull appendages produced by that builder. A license shall be issued for that purpose.
- E.1.3 Measurement shall be taken in accordance with the Measurement Diagrams and Appendix, Measurement.
- E.1.4 The rudder blade and the dagger board made of epoxy coated Abache or heavier wood shall carry an official sticker showing the Licensed Producers name and running number of the product.
- E.1.5 Repairs and preventive maintenance to hull appendages or any fittings and fixings may be carried out without violation to these Rules provided such repairs are made in such a way that the essential shape characteristics or function of the original are not affected.

E.2 Builders

- E.2.1 Hull appendage builders shall be licensed by the OAR and the ISAF.
- E.2.2 The Licensed builder shall, at his own expense, correct or replace any hull appendage that do not comply with the Class Rules as a result of an omission or error by the builder.
- E.2.3 The builder of plywood daggerboard and rudder blade is free.

E.3 Dagger Board

As the dagger board strength and bending abilities strongly affects the performance of the dinghy, all producers of the same in epoxy laminated wood have to be licensed by the OAR and ISAF in order to guaranty equal bending and strength abilities. The measurement tolerances are intended to allow for necessary manufacturing tolerances and shall not be used to alter the design.

E.3.1 Materials

The daggerboard shall be manufactured of water resistant plywood or of epoxy coated Abaci or heavier wood with a thickness of 13 ± 1 mm in accordance with the Measurement Diagrams.

E.3.2 Dimensions

The daggerboard dimensions shall be in accordance with the Measurement Diagrams.

E.4 Rudder Blade, Rudder Head, Tiller and Tiller Extension

As the rudder blade strength and bending abilities strongly affects the performance of the dinghy, all producers of the same in epoxy laminated wood have to be licensed by the OAR and ISAF in order to guaranty equal bending and strength abilities. The measurement tolerances are intended to allow for necessary manufacturing tolerances and shall not be used to alter the design.

The rudder head and the placing of its fittings and equipment shall conform to the Measurement Diagrams. The measurement tolerances are intended to allow for necessary manufacturing tolerances and shall not be used to alter the design.

E.4.1 Rudder Blade

- a) **Materials**
The rudder blade shall be manufactured of water resistant plywood or of epoxy coated Abaci or heavier wood with a thickness of $13 \pm 1\text{mm}$ in accordance with the Measurement Diagrams.
- b) **Dimensions**
The rudder blade dimensions shall be in accordance with the Measurement Diagrams.

E.4.2 Rudder Head

- a) **Materials**
The rudder head shall be of epoxy-laminated wood or of a composite type as provided by the Licensed Builder.

E.4.3 Tiller and Tiller Extension

- a) **Materials**
The tiller shall be of epoxy-laminated wood or of a composite type as provided by the Licensed Builder.
- b) The tiller has to be fixed to the head in a sturdy manner
- c) The tiller extension is free

E.4.4 Fittings

A line or pintle may be fitted to the rudder head to prevent the rudder blade to pivot from its desired position. (i.e. vertical and horizontal).

SECTION F – RIG

F.1 Measurements and Endorsements

- F.1.1 A spar and its rigging shall conform to the Class Rules in force at the time of fundamental measurement. Alternation or repairs shall be made in accordance with the current Class Rules.
- F.1.2 Measurement shall be taken in accordance with the Measurement Diagrams and Appendix, Measurement.
- F.1.3 The rig dimensions, the placing of fittings and equipment shall conform to the Measurement Diagrams.

F.2 Manufacturers

- F.2.1 IZCA may, after consulting with the ISAF/MNA, approve one or more individuals at a spar manufacturer to measure spars produced by that manufacturer. A License shall be issued for this purpose.
- F.2.2 A rig builder is any manufacturer approved by ISAF and licensed by the OAR to build and supply the Zoom 8 rig in accordance with the Zoom 8 Design Specifications valid from time to time.
- F.2.3 The Licensed rig builder shall at his own expense, correct or replace any rig items that do not comply with the Class Rules as a result of an omission or error by the builder.

F.3 Mast

- a) The mast shall only be supplied by an OAR Licensed Builder approved by ISAF.
 - b) The mast is a one or two-piece mast of sailboard type, specifically designed for the Zoom 8 with needed material strengthening for strength and correct bending curve.
 - c) Each produced mast shall be fitted with an engraved manufacturer's identification code and/or a running serial number to be able to be recognised as a Zoom 8 One-Design mast.
- F.3.1 Materials
The mast shall be of rolled GRP as manufactured by an OAR and ISAF/MNA Licensed Builder.
- F.3.2 Fittings
- a) To prevent abrasion at the deck collar, the mast foot and goose neck area, a tube or tape collar of uniform thickness not exceeding 1 mm may be placed around the entire circumference of the mast. The height shall not exceed 110 mm.
 - b) A disc of uniform thickness not exceeding 1 mm in thickness may be placed in the mast foot in the hull.

- c) The mast shall be sealed to prevent water from entering into the mast when capsizing. The seal shall not, however, influence the bending properties of the mast.

F.3.3 Dimensions

- a) As supplied by a Licensed Builder.
- b) The mast shall be hollow, except what is stated in F.3.2.c.

F.4 Boom

A Licensed Builder shall supply the boom.

F.4.1 Materials

The boom shall be constructed of black anodised aluminium alloy .

F.4.2 Fittings

- F.4.a The length of the mainsheet wire or line, fixed at the boom, shall not when tensioned by the sheet get further at its deepest point between boom and upper side line than 100 mm. The mainsheet block shall be placed directly on the line or with a shackle or a snap-hook. Centre of the block sheave may not be more than 230 mm below lower edge of the boom. All fittings as stated in the Measurement Diagrams.

- F.4.b The Bull's eye on starboard side of the boom in the clew corner may be replaced with a block with a maximum sheave diameter of 25 mm and a similar block may be fitted in front of the Clam Cleat. The Clam Cleat may be turned around to alter the tensioning direction.

F.4.3 Dimensions

The boom shall have a uniform round section with an outer diameter of 38 mm and a wall thickness of 2 mm.

F.5 Spinnaker Boom

No spinnaker or spinnaker boom is allowed.

F.6 Standing Rigging

No standing rigging is allowed.

F.7 Running Rigging and Fittings

- a) The running rigging, fittings and the placing of fittings shall conform to the Measurement Diagrams. The Measurement tolerances are intended to allow for necessary manufacturing tolerances and shall not be used to alter the design.

- b) Any sheets or lines supplied by the builder may be substituted with sheets or lines with the same standard diameter of any length or material except that:
 - i. each sheet or line shall be of one continuous length of uniform diameter but for the outhaul line as stated in C.1.3.i.
 - ii. Wire is permitted only for supporting the mainsheet single block with becket at the boom and the kicking strap, as supplied by the builder.
- c) The blocks, swivel jammer or main sheet jammer, jamming blocks and blocks, cam cleats and the clam cleat may be replaced by any type of similar fitting of the same principal design and same standard dimension as supplied by the builder. Type of block bearings is not restricted.
- d) The shackles may be replaced by other type of shackles or by quick-release hooks.
- e) A block may be attached to the eyelet in the clew corner of the sail and a single or double block at the Cunningham eyelet to decrease abrasion and ease the tensioning of the sail. The make and the size of the blocks are free.
- f) A block may be attached to the mast at a point not lower than 400 from the foot of the mast for easing the tensioning strength of the Cunningham. Alternatively, one of the existing Cunningham blocks on deck may be exchanged to a double block. The make and the size of the block are free.

F.7.1 Materials

As supplied by the builder or of a similar kind.

F.7.2 Dimensions

- a) The standard diameter of the main sheet is 8 - 10 mm.
- b) The standard diameters of all other lines is 5 – 6 mm.

SECTION G – SAILS

G.1 Measurements and Endorsements

- G.1.1 The sail shall conform to the Class Rules in force at the time when it was first measured. Alternations or repairs shall be in accordance with the current Class Rules.
- G.1.2 An MNA may, after consulting with the IZCA approve one or more individuals at a sail loft to measure sails produced by the loft. A license shall be issued for this purpose.
- G.1.3 Sails shall be made and measured in accordance with the ISAF Sail Measurement Rules, except where varied herein.
- G.1.4 Sails shall carry an official measurement stamp or sticker near the tack.

- G.1.5 Substantially altered or repaired sails shall be re-measured and the measurer shall attach a new official measurement stamp or sticker showing the new date of measurement.

G.2 Sailmaker

- G.2.1 A sailmaker is a manufacturer licensed by the OAR and accepted by ISAF to build and supply the Zoom 8 sail in accordance with the Zoom 8 Design Specifications.
- G.2.2 All sails produced by a Licensed Sailmaker have to be cut using templates and / or computer based cutting programs for laser cutting provided by the OAR and no alternations to these are allowed.
- G.2.3 All reinforcements produced by a Licensed Sailmaker for use in the Zoom 8 sail, both primary and secondary, have to be cut using templates and / or computer based cutting programs for laser cutting provided by the OAR and no alternations to these are allowed.
- G.2.4 Primary reinforcements have to be cut using the Zoom 8 sailcloth specifically produced for the Zoom 8 sail provided by an OAR Licensed Cloth producer.
- G.2.5 The Licensed Sailmaker shall, at his own expense, correct or replace any sail that does not comply with the Class Rules as a result of an omission or error by the sailmaker.

G.3 Mainsail

The sail, battens and the placing, size and form of fittings shall conform to the measurement Diagrams. The Measurement tolerances are intended to allow for necessary manufacturing tolerances and shall not be used to alter the design.

G.3.1 Construction

- a) The sail shall be constructed from sailcloth approved by the IZCA and the OAR.
- b) The body of the sail shall throughout consist of a specifically for the Zoom 8 dinghy produced even woven ply of polyester provided by an OAR Licensed Cloth producer.
- c) The sail shall have three batten pockets of even length.
- d) The following is permitted: Stitching, gluing, tapes, clew corner eyelet, Cunningham eyelet, corner pulleys, one window, sailmaker label, measurement stamp, IZCA Class Fee button and tell tales.

G.3.2 Dimensions

- a) Dimensions according to the Measurement Diagram.

G.4 Headsails

No headsails are allowed

G.5 Spinnakers

No spinnakers are allowed

G.6 Identification Marks

G.6.1 The Class Insignia and the sail numbers and letters shall be in accordance with the RRS except where varied herein.

G.6.2 The numbers shall be of the following minimum dimensions:

Height 230 mm

Space between adjoining numbers 40 mm

G.6.3 The Class insignia shall conform to the dimensions and requirements as detailed in the Measurement Diagrams.

G.6.4 The Class insignia may be displayed on only starboard side of the sail, and when displayed on the port side show a mirror face of the insignia placed at same place as on the starboard side.

Effective: 14.03.07

SECTION 1 – Appendix, MEASUREMENTS

In the case of a measurement dispute on the hull, spars, sails, dagger board and rudder blade, rigging, type of fittings and equipment and the placing of same not explicitly covered by these Rules, Measurement Diagrams and Appendix, Measurement, the following procedure shall be adopted:

A sample of 5 other dinghies shall be taken and measured using identical techniques. The dimensions of the disputed dinghy shall be equal to, or between the maximum and minimum dimensions obtained from these 5 dinghies. If the dinghy in question is outside these dimensions the matter, together with any relevant information, shall be referred to the measurer recognised by the NA, who shall give the final ruling. If any of the dimensions of the sample are considered to be unusual, all relevant information shall be referred to the Chief Measurer of the MNA.

All dimensions shown in millimetre.

MEASUREMENT

1. If a protest is lodged against a yacht alleging that there has been alternations or additions thereto not permitted by the Rules of the Class, and the Race Committee, on investigation, is in doubt as to whether a violation of the Rules has occurred, it shall measure the part of yacht subject to protest in accordance with paragraph 2.

2. (a) Hull

The part of the hull on the yacht subject to protest shall be measured in accordance with the measurement directions attached and the same part of not less than five (5) other dinghies, chosen by the Race Committee as random samples, shall be measured in the same manner. The Race Committee shall select, if possible, Zoom 8 dinghies, which show no evidence of having been repaired or altered.

The arithmetic mean of the measurements of the dinghies chosen, as the sample shall be calculated, and the protested dinghy shall be disqualified if the difference between the mean value so determined and the measurement on the dinghy subject to protest shall exceed the following values for the measurements indicated:

any point along the keel line (rocker)	4 mm
any other area of the hull	5 mm

2. (b) Equipment

If any mast, boom, fitting, dagger board or rudder blade is subject of a protest as to size, shape or location, measurement thereof shall be governed by the drawings and tolerances set forth in the Measurement Diagrams (ref: Rules).

3. Measurement Template

See drawing “template and example of measuring”

4. Measurement of Hull

Turn the dinghy upside down. Starting at the transom, measure out along the keel line and establish point A, which will fall roughly athwart ship of point X, the area under protest.

Lay a straight edge across the transom as shown in the sketch and measure out a distance along the vertical surface of the gunwale and establish point B, which will fall approximately in line with the measured point on the keel line (A) and the area under protest (X). Distances shown are as example only.

See drawing “template and example of measuring”

The centre line of the dinghy must then be established at point A. Mark the centre line at point A. Now measure from point A to point X and retain this figure to establish an equal point of measurement on the five random sample dinghies.

Place the centre of the measurement template on point A, line up the vertical arms with points B and equalise exactly the distance from the horizontal bar to the inside of the gunwale on each side of the dinghy.

Measure the shortest distance from point X up to the vertical bar and record this measurements (50 mm in example).

See drawing “template and example of measuring”

This procedure should now be repeated using all the distances established above and a similar reading obtained for the distances from the hull to the horizontal cross bar on the other five sample dinghies.

Example: Measurement on five sample dinghies	92 mm
	90
	94
	93
	<u>91</u>
	460 mm

Arithmetic mean	460/5	92 mm
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Measurement on protested dinghy	96 mm
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Difference	4 mm
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This does not exceed the mean value by more than 5 mm therefore protest is disallowed.

Measurement of Rocker

Turn the dinghy upside down. Measure out a straight distance of 2360 mm in the direction of the keel line of the dinghy.

Set up a taught string over the centre line of the dinghy exactly 150 mm above the keel at the transom and 130 mm above the keel at 2360 mm from the transom.

Measure the distance along the keel from transom to point under protest and retain this figure to establish an equal point of measurement on five sample dinghies.

Measure the shortest distance to the string and then repeat procedure with five sample dinghies.

Calculate arithmetic mean of the measurements from five sample dinghies. Point under protest (X) should not deviate by more than 5 mm.

See drawing “template and example of measuring”